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EVALUATION HIGHLIGHTS

In Chad, a project to ensure food security in the capital

Scope Bahr Linia Hydro-agricultural Development Project (PAHA-BL), Phase 1

Area of operation Chad

Amount €9.495 M (€6.495 M from AFD and €3 M from the Republic of Chad)

Period 2011-2019

Evaluation conducted by ICEA/Espelia*

The Bahr Linia peri-urban area plays an essential role in the food security and food independence of Chad's capital, N'Djamena. The Bahr Linia Hydro-agricultural Development Project (PAHA-BL), which sought to develop agricultural and fish-farming activities in this area, is a good illustration of the challenges that Chad faces in land tenure and food security. What lessons can be learnt from the Phase 1 evaluation to help the next phase of the project?

Background

PAHA-BL targeted a peri-urban area vital to the food security of the capital, N'Djamena, because the former dead branch of the Chari river – referred to as Bahr Linia – is a crucial water resource for agricultural and fish production on its outskirts. The problem is that climatic phenomena (especially recurrent droughts) and human activities have slowed down and disrupted the flow of the Bahr Linia watercourse. These changes have reduced the region's agricultural and fish-farming potential, as well as its environmental potential more broadly. As a result, N'Djamena has become more dependent on food imports from Cameroon.

With population growth and N'Djamena's urban spread in the background, PAHA-BL responded to a dual need for peri-urban development and for strengthening the capital's food security. Chad's Ministry of Lands, Housing and Urban Development (MLHUD) implemented this project to increase agricultural and fish production, as well as improve access to water and land management. Phase 1 of the project involved watercourse restoration of a 38-km stretch of the Bahr Linia.

FOCUS

CHALLENGES FACING AGRICULTURE IN CHAD

In Chad, about 80% of the population is employed in the primary sector, and the agricultural sector is responsible for more than 50% of the national GDP in value added. However, the country's potential is not fully exploited: only 6% of arable land is used.

The challenges are numerous and include climatic variations increased by climate change, soil depletion, poor management of water resources, a fragile security context, and difficulties in accessing agricultural inputs.

Thus, although the economy is heavily dependent on agriculture and livestock, the country is not able to ensure food security for the entire population or to ensure decent incomes for everyone working on family farms.

In addition, without a national land policy, land has become expensive—a trend exacerbated by urban sprawl, population growth, and natural constraints that transform agricultural land into land for housing.

The Bahr Linia area is home to farmers and herders whose livelihoods depend on the Linia, a branch of the Chari River.

The key project outcomes

+55%: the increase in cultivated area between 2016 and 2021, representing 860+ hectares

Hydraulic development has led to a more continuous availability of water resources, which has enabled the following:

- **Increased agricultural and fish production**
- **Diversification of vegetable products** and improvement in household diets
- **Development of new activities** (brickworks, etc.) made possible by water restoration

→ **Water has brought socio-economic benefits to all beneficiaries.**

→ **The outcomes have been less than expected but are promising for Phase 2 of the program and will be more significant in the long term.**

Land management: basics need to be worked on

- A land management committee was created, after which plots were registered and a land information system created.
- However, beneficiaries have not received a registration certificate, and the new rural land plan has not been established.

→ **Studies carried out have equipped the MLHUD with a mapping and cadastral plan of the area, which are the initial bases for improved water and land management. To date, a decree on land is awaiting publication.**

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** This document was produced by AFD as a summary of the evaluation conducted by ICEA/Espelia.*

Evaluation conclusions

Project governance	• **The initial multisectoral coordination framework** brought together several relevant sectoral stakeholders. • **The project partially aligns with the other existing food strategy programs**, although it only partially meets the country's priority development objectives.	• **Gaps have emerged in practice in the management of activities** (insufficient involvement of sectoral ministries, lack of project management resources). • **The deadlines and initial budget were not met, which required adapting the project scope**: - Implementation was delayed by various problems, including calculation errors during feasibility studies (regarding water volume in the Chari and Bahr Linia) and climatic events (such as the 2017 flood). - The Chadian government's budgetary difficulties led AFD to finance all the components. Other activities thus had to be abandoned (development of riverbanks, development of a rural land plan, support in the development of crops, etc.).
Infra-structure, water and land management	• **Infrastructure to facilitate water flow was put in place**, despite challenges that caused delays and the fact that the structures require more maintenance. • **The objective of making water available on a large scale was relevant** in terms of meeting the primary needs of the beneficiaries. • **Successes were achieved in mapping the area** (creation of a rural land tenure system) **and crisis management**, for example in order to react to floods, with the support of technical assistance.	• **The project was unable to meet all the set objectives**: those related to water and land management were not fully achieved, as the project focused more on hydraulic development than on social engineering activities. • **Some needs of beneficiaries, especially female**, were not identified during the investigation phase (*see box below*). • Although the intervention logic was able to adapt to climate events, **it did not sufficiently integrate climate change adaptation needs upstream**.
Socio-economic impacts	• **The objectives of increasing agricultural production and improving access to water were met**: agricultural activities in the Bahr Linia area have gradually developed, not only thanks to the project, but also thanks to the spontaneous mobilization of beneficiaries. • Despite the lack of quantitative data, it appears that **more continuous availability of water generates socio-economic benefits** for all beneficiaries, through the development of agri-sylvo-pastoral activity. • **The positive effects of the project appear to be sustainable over the medium to long term** (deployment of motor-driven pumps, improved household diet). • **Other practices will persist without negative influence as long as they remain limited** (pumping by farmers or individuals who were not historically established in the area, unequal competitiveness between products from family farming and those from more productive agriculture) **or as long as they are resolved in Phase 2**.	• **The impacts of the project vary depending on the beneficiaries considered**: the economic benefits help men more than women, and farmers more than fish farmers. • **Poor management of the infrastructure and of the water resources could limit the latter's long-term use**. • **The area must be more resilient to both human activities and climatic events** (e.g., overexploitation, erosion, flooding, etc.): - Studies are needed to clarify the extent of the real responsibility of the project in the occasional flooding of certain outlying neighborhoods of N'Djamena. - Improvements and stricter control of activities in the area are needed to deal with this, as are a better understanding of the functioning of Bahr Linia and stronger legal oversight to mitigate land conflicts in the area.

WHAT IMPACT FOR WOMEN?

The evaluation highlights that the initial lack of a gender approach has led to more nuanced outcomes for women than for men, given their specific activities and needs. In particular, women have suffered limited access to new business opportunities.

The lower income of women reduces the benefits they draw from the water restoration. For example, in irrigation, access to motor-driven pumps is more difficult for women than for men, because of their cost. Nor do they always have the means to pay for crossing the river (which they could previously cross on foot) with a canoe or to possess one, thereby depriving them of trade on the other side of the Bahr Linia.

From this we can see that to calibrate appropriate support (e.g., dedicated financial support), it's essential to differentiate the needs and means of women from those of men, upstream of the project.

RECOMMENDATIONS FOR PHASE 2 *(in progress)*

- **Carry out additional improvements** to strengthen resilience to climate change, better manage water resources, and ensure that beneficiaries can conduct social and commercial exchanges.
- **Develop a real local and national land strategy** to secure agricultural land in the area, in the face of urbanization and land speculation.
- **Set up more inclusive governance** that better takes into account the interests of beneficiaries.
- **Support the development of farmers' activities** (irrigation, marketing, etc.), including for women.

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